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ASBESTOS MANUFACTURING POINT SOURCE CATEGORY

Proposed Effluent Limitations and Guidelines for Certain Subcategories

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 427]

[FRL 256-1]

ASBESTOS MANUFACTURING POINT SOURCE CATEGORY

Effluent Limitations and Guidelines for Certain Subcategories

Notice is hereby given that effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources set forth in tentative form below are proposed by the Environmental Protection Agency (EPA). On February 26, 1974, EPA promulgated a regulation adding Part 427 to Chapter 40 of the Code of Federal Regulations (39 FR 7526). That regulation with subsequent amendments established effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources for the asbestos manufacturing point source category. The regulation proposed below will amend 40 CFR Part 427, asbestos manufacturing point source category, by adding thereto the coating or finishing of asbestos textiles subcategory (Subpart H), the solvent recovery subcategory (Subpart I), the vapor absorption subcategory (Subpart J) and the wet dust collection subcategory (Subpart K) pursuant to sections 301, 304 (b) and (c), 306(b) and 307(c) of the Federal Water Pollution Control Act as amended (33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316(b) and 1317(c); 86 Stat. 816 et seq.; P.L. 92-500) (the Act).

(a) Legal Authority

(1) existing point sources

Section 301(b) of the Act requires the achievement by not later than July 1, 1977, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of the Act. Section 301(b) also requires the achievement by not later than July 1, 1983, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of best available technology economically achievable which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b) to the Act.

Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods and other alternatives. The regulation proposed herein sets forth effluent limitations and guidelines, pursuant to sections 301 and 304(b) of the Act, for the coating or finishing of asbestos textiles subcategory (Subpart H), the solvent recovery subcategory (Subpart I), the vapor absorption subcategory (Subpart J), and the wet dust collection subcategory (Subpart K) of the asbestos manufacturing point source category.

(2) new sources

Section 306 of the Act requires the achievement by new sources of a Federal standard of performance providing for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

Section 306(b)(1)(B) of the Act requires the Administrator to propose regulations establishing Federal standards of performance for categories of new sources included in a list published pursuant to section 306(b)(1)(A) of the Act. The Administrator published in the Federal Register of January 16, 1973, (38 FR 1624) a list of 27 source categories, including the asbestos manufacturing category. The regulations proposed herein set forth the standards of performance applicable to new sources for the coating or finishing of asbestos textiles subcategory (Subpart H), the solvent recovery subcategory (Subpart I), the vapor absorption subcategory (Subpart J), and the wet dust collection subcategory (Subpart K), of the asbestos manufacturing point source category.

Section 307(c) of the Act requires the Administrator to promulgate pretreatment standards for new sources at the same time that standards of performance for new sources are promulgated pursuant to section 306. Sections 427.86, 427.96, 427.106 and 427.116, proposed below, provide pretreatment standards for new sources within the coating or finishing of asbestos textiles subcategory (Subpart H), solvent recovery subcategory (Subpart I), the vapor absorption subcategory (Subpart J), and the wet dust collection subcategory (Subpart K), of the asbestos manufacturing point source category.

Section 304(c) of the Act requires the Administrator to issue to the States and appropriate water pollution control agencies information on the processes, procedures or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under section 306 of the Act. The report or "Development Document" referred to below provides, pursuant to section 304(c) of the Act, information on such processes, procedures or operating methods.

(b) Summary and Basis of Proposed Effluent Limitations Guidelines for Existing Sources and Standards of Performance and Pretreatment Standards for New Sources

(1) general methodology

The effluent limitations, guidelines and standards of performance proposed herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations and standards are appropriate for different segments within the category. This analysis included a determination of whether differences in raw material used, product produced, manufacturing process employed, age, size, waste water constituents and other factors require development of separate limitations and standards for different segments of the point source category. The raw waste characteristics for each such segment were then identified. This included an analysis of the source, flow and volume of water used in the process employed, the sources of waste and waste waters in the operation and the constituents of all waste water. The constituents of the waste waters which should be subject to effluent limitations and standards of performance were identified.

The control and treatment technologies existing within each segment were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which are existent or capable of being designed for each segment. It also included an identification of, in terms of the amount of constituents and the chemical, physical, and biological characteristics of pollutants, the effluent level resulting from the application of each of the technologies. The problems, limitations and reliability of each treatment and control technology were also identified. In addition, the non-water quality environmental impact, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise and radiation were identified. The energy requirements of each control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available," "best available technology economically achievable" and the "best available demonstrated control technology, processes, operating methods, or other alternatives." In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, the age of equipment and facilities involved, the process employed,

the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors.

The data upon which the above analysis was performed included EPA permit applications, EPA sampling and inspections, consultant reports, and industry submissions.

The pretreatment standards proposed herein are intended to be complementary to the pretreatment standards proposed for existing sources under 40 CFR Part 128. The basis for such standards is set forth in the FEDERAL REGISTER of July 19, 1973, 38 FR 19236. The provisions of Part 128 are equally applicable to sources which would constitute "new sources," under section 306 if they were to discharge pollutants directly to navigable waters, except for § 128.133. That section provides a pretreatment standard for "incompatible pollutants" which requires application of the "best practicable control technology currently available," subject to an adjustment for amounts of pollutants removed by the publicly owned treatment works. Since the pretreatment standards proposed herein apply to new sources, §§ 427.86, 427.96, 427.106 and 427.116 below amend § 128.133 to specify the application of the standard of performance for new sources rather than the "best practicable" standard applicable to existing sources under sections 301 and 304(b) of the Act.

(2) Summary of conclusions with respect to the coating or finishing of asbestos textiles subcategory (Subpart H), the solvent recovery subcategory (Subpart I), the vapor absorption subcategory (Subpart J), and the wet dust collection subcategory (Subpart K), of the asbestos manufacturing point source category.

(i) *Categorization.* For purposes of developing effluent limitations guidelines for existing sources and standards of performance for new sources, the textile, friction materials and sealing devices segment of the asbestos manufacturing point source category has been divided into four subcategories: Coating or finishing of asbestos textiles, solvent recovery, vapor absorption, and wet dust collection. The subcategories, largely based on the source of waste waters and their nature, are only indirectly related to raw materials and finished products. In the first subcategory, coating or finishing of asbestos textiles, the waste waters may be considered near true process wastes, while in the other three subcategories, waste waters result from essentially ancillary operations (e.g., waste or by-product recovery and air emissions control). Three of the subcategories are encountered in the textile segment of the industry and three are encountered in the friction materials segment. The actual textile weaving and sealing devices segments are dry industries and do not generate waste waters.

(1) Subpart H—Coating or Finishing of Asbestos Textiles Subcategory: Much of the asbestos textiles production is coated or impregnated with various materials to impart particular properties to the finished product or to eliminate the problem of airborne particles in further handling of the textiles. Wastes may be generated by spills or by dumps of remaining coating solutions and equipment cleanup at the end of a run.

(2) Subpart I—Solvent Recovery Subcategory: In some textile coating and friction materials operations, the solvents driven off in drying ovens are captured by adsorption onto activated carbon. The solvents are then removed from the activated carbon by steam stripping and recovered by decanting or distilling the condensate. Waste waters are generated by this recovery of solvents.

(3) Subpart J—Vapor Absorption Subcategory: In some drying operations the solvents driven off are removed from the exhaust gases by absorption in wet scrubbers. No attempt is made to recover the solvents and they are discharged as a component of the waste waters from the wet scrubbers.

(4) Subpart K—Wet Dust Collection Subcategory: Many of the finishing operations associated with friction materials (e.g., grinding and drilling) generate large amounts of air-borne particulates. Quality control of ambient air within the plant is attained by use of positive ventilation and results in a potential atmospheric discharge with a high level of particulates. In some facilities, use of wet scrubbers to remove particulates prior to discharge to the atmosphere results in a waste water which in turn is discharged.

(ii) *Waste characteristics.* The pollutants contained in the raw waste waters represent either materials lost through direct processing of raw materials or through ancillary operations and are found in both the dissolved and particulate state. The first state is largely represented by various organic solvents used in the industry, while the latter is represented by fillers (pigments, metals, etc.) and binders (primarily resins) incorporated into the products. The great dissimilarities of the wastes among the subcategories require individual consideration of their characteristics.

The volume of waste waters generated in the coating (impregnating) of asbestos textiles cannot be related directly to the quantity of textiles treated, since it varies with the number and length of runs and the particular coatings being applied on a given day. Total volume, however, is expected to be less than 750 liters (200 gallons) per day for a coating operation. The wide variety of coatings applied is tailored to the specifications of the customer, and thus the specific composition of the waste water is quite variable. In general, the waste is high in COD (largely contributed by solvents) and suspended solids (primarily pigments, metals and other fillers incorporated into the coatings).

The quantity of waste water from solvent recovery operations is dependent on the type and size of the equipment and, since it arises from an activated carbon regeneration process, cannot be related directly to the level of production in a plant. The discharge is normally steady and a typical volume is of the order of 38,000 liters (10,000 gallons) per day. The waste waters may contain solvents and/or other organic materials that are either evaporated from the product or generated during the recovery process. The suspended solids level is normally very low and asbestos fibers should be absent. Typical waste water characteristics from one solvent recovery operation are: BOD5 1125 mg/l, COD 1930 mg/l, and suspended solids 0 mg/l.

Waste waters from the vapor absorption unit are discharged about once every three weeks for a 16 hour period. The rate of discharge is approximately 3.8 liters per second (60 gallons per minute) for a total volume per period of approximately 200 cubic meters (58,000 gallons). The effluent waste load is estimated to be 410 kg (900 pounds), of COD, representing a concentration of approximately 1860 mg/l; and the pH of the waste will be above 9.5 due to charging of the scrubber with 22.7 kg (50 pounds) of sodium hydroxide.

The water use rate in wet dust collectors varies from 0.06 to 1.3 liters per second per cubic meter per minute of air scrubbed (0.5 to 10 gpm per 1,000 scfm) and the plant air systems served by wet scrubbers range from 280 to 1,700 cubic meters per minute (10,000 to 60,000 scfm). The resulting waste water volumes are from 190 to 570 cubic meters (50,000 to 150,000 gallons) per day. The waste waters from wet dust collectors are slurries of the dust emanating from grinding and drilling operations used in finishing friction products and are characterized by high suspended solids. Since friction materials are specifically designed to be hydrophobic dissolved solids content should be low.

(iii) *Origin of waste water pollutants.* The waste water pollutants among the four subcategories are of such diverse origin as to require independent discussion of each subcategory. None of the waste waters or waste water pollutants are true process wastes. The wastes and waste waters associated with the coating and finishing of asbestos textiles most closely approximate true process wastes in that they are associated with the actual production line for manufacture of the finished product. In the other three subcategories the waste waters and waste water pollutants originate in ancillary operations.

Within the coating and finishing of asbestos textiles subcategory, the waste waters originate from two sources: (1) washdown of spills (primarily dragout from the coating tanks) and the small remnants of coating solutions dumped at the end of runs, and (2) cleanup of the equipment following runs. The pollutants represent the entire spectrum of materials (solvents, solutes and fillers) found in the various coating solutions.

The solvent recovery subcategory represents an ancillary operation associated with some textile coating, friction material and sheet gasket material facilities. Solvents used in the manufacture of the products are driven off in drying

ovens and these solvents are removed from the oven exhaust gases by adsorption on activated carbon. The activated carbon is regenerated by steam stripping and the solvents are recovered from the condensate by decanting or distillation. The waste waters and its pollutants represent the spent distillate and its entrained solvents.

The vapor absorption subcategory covers an ancillary operation associated with atmospheric emission control that is encountered in a very limited number of facilities (a single case documented in the textile coating segment of the industry). When the volume and value of solvents removed in drying operations do not justify the effort, solvent recovery is not practiced. Satisfactory quality control of atmospheric emissions, however, requires removal of the solvents from the exhaust gases. Within the subject subcategory this is accomplished by means of wet scrubbers. Waste flows arise from discharge of the scrubber water and contain appreciable quantities of entrained solvents and sodium hydroxide that is added to the scrubber water to improve solvent removal.

The wet dust collection subcategory covers an air emission control operation encountered in some friction materials facilities. Grinding and drilling associated with finishing of friction products produce large amounts of air-borne particulates. Positive ventilation is employed to keep these particulates out of the ambient air within the plants, and wet scrubbers may be used to remove the particulates from the exhaust air prior to discharge to the atmosphere. Water may be used on either a once-through or recycle with blowndown basis, but in either case there are appreciable flows of waste water with high suspended solids content.

(iv) *Treatment and control technology.* Waste water treatment and control technologies have been studied for each subcategory of the industry to determine what is (a) the best practicable control technology currently available, (b) the best available technology economically achievable, and (c) the best available demonstrated control technology, processes, operating methods or other alternatives. The control technologies appropriate for each level of control vary from subcategory to subcategory.

The degree of control considered appropriate for all levels of technology in the coating and finishing of asbestos textiles subcategory is complete elimination of waste water discharges. This may be accomplished through in-plant control to contain spills and dumps and maximum utilization of dry cleanup to reduce the volume of wastes. The wastes should be containerized for shipment to a commercial waste salvage firm or for disposal in a controlled sanitary landfill. Some inplant control measures are now in use, but no plant completely retains all wastes.

For the solvent recovery subcategory different control technologies are applicable for the various levels of control. The best practicable control technology currently available is considered to be application of efficient biological treatment ("secondary treatment") to the existing raw waste. This should result in discharge of a final effluent with average concentrations of 30 mg/l for BOD5, 50 mg/l for COD, and 30 mg/l for total suspended solids.

The best available technology economically achievable entails further treatment of the effluent from the biological treatment process in a two-stage granular activated carbon column unit. Discharges with average concentrations of 5 mg/l each of BOD5, COD and total suspended solids are expected for this level of technology.

New sources should provide as a minimum the level of control technology equivalent to the BPCTCA. It should be noted, however, that all point sources must attain BATEA after July 1983. Economies may be realized by installation of both biological and carbon column treatment at the time of initial construction. If only biological treatment is installed initially, provisions should be made for ready incorporation of the carbon column unit. No point sources in the solvent recovery subcategory have treatment other than settling in lagoons at present.

Complete elimination of waste waters and their pollutants is recommended for all levels of control in the case of the vapor absorption subcategory. This is to be accomplished by replacement of wet scrubbers with fume incinerators. The recommended technology is the current practice for most facilities within the industry.

Removal of suspended solids through use of primary settling facilities is the recommended best practicable control for the wet dust collection subcategory. Adequate settling should produce a final discharge with an average total suspended solids content of no more than 30 mg/l. This level of control is the minimum control currently practiced by all point sources within this subcategory.

Complete elimination of waste water discharges is the best available technology economically achievable. This level of control can be attained by replacement of wet scrubbers with bag houses, a technique currently employed in most friction materials finishing facilities. New sources should comply with this level of control.

Solid waste control must be considered.

Best practicable control technology and best available control technology as they are known today require disposal of the pollutants removed from waste waters in this industry in the form of solid wastes and liquid concentrates. In some cases these are nonhazardous substances requiring only minimal custodial care. However, some constituents may be hazardous and may require special consideration. In order to ensure long term protection of the environment from these hazardous or harmful constituents, special consideration of disposal sites must be made. All landfill sites where such hazardous wastes are disposed should be selected so as to prevent horizontal and vertical migration of these contaminants to ground or surface waters. In cases where geologic conditions may not reasonably ensure this, adequate precautions (e.g. impervious liners) should be taken to ensure long-term protection to the environment from hazardous materials. Where appropriate, the location of solid hazardous materials disposal sites should be permanently recorded in the appropriate office of the legal jurisdiction where the site is located.

In addition to the foregoing considerations, care should be exercised to prevent the smaller particulates from becoming air-borne pollutants. This is especially true when the solid wastes may contain asbestos fibers. This may be accomplished by proper wetting or covering of the solid wastes during transportation and final disposal.

(v) *Cost estimates for control of waste water pollutants.* Costs associated with implementation of recommended controls are varied. Capital investment for combined BPCTCA and BATEA ranges from a low of $2,000 for the coating and finishing of asbestos textiles subcategory to a high of $219,000 for the solvent recovery subcategory. Total annual costs (including capital costs, depreciation, operation and maintenance costs, and energy and power costs) for combined BPCTCA and BATEA range from a low of $8,400 to a high of $76,000.

Lowest costs are encountered within the textile coating subcategory. Capital investment for total containment of wastes and their disposal as containerized wastes ranges from near zero to $2,000 for the various plants. Similarly, total annual costs range from $8,000 to $8,400.

The highest costs are encountered within the solvent recovery subcategory. Capital investments for an individual plant are estimated to be $73,000 for the biological treatment system and $146,000 for the carbon column unit, or a total of $219,000 for the complete treatment system. The respective total annual costs are estimated to be $32,300 and $43,800 for a total of $76,100.

Capital costs for the single point source plant within the vapor absorption subcategory are estimated to be $152,000. Total annual costs are placed at $46,000, with power and energy cost being more than one-third of this total.

No new capital or annual costs are projected for the wet dust collection subcategory in the case of BPCTCA. All point source dischargers currently furnish settling of wastes from this subcategory in facilities provided primarily to handle wastes from other operations within the plants. In a hypothetical case where installation of a mechanical clarifier might be necessary to meet BPCTCA (1977) levels, capital and annual costs would be $44,000 to $83,000 and $17,000 to $32,700 respectively for air flows of 10,000 to 60,000 scfm. Capital and annual costs for BATEA are $43,000 to $146,000 and $9,400 to $27,500 respectively, dependent on the size (air flow) of the operation.

Capital and annual costs for the segments of the industry affected are low. For 1977, costs are incurred by one sheet gasket materials plant (solvent recovery subcategory). For 1983, costs are incurred by one sheet gasket and four friction materials plants (solvent recovery and wet dust collection subcategories respectively).

(vi) *Energy requirements and non-water quality environmental impacts.* Increase in energy requirements for implementation of the recommended levels of control are associated primarily with two subcategories, solvent recovery and vapor absorption. Within the solvent recovery subcategory, pumping and aeration for biological treatment would consume approximately 350,000 kwh/yr of electricity and pumping for the carbon column unit would consume approximately 40,000 kwh/yr. These represent added energy use for the subcategory. The added energy requirement for the vapor absorption subcategory is that of fuel (natural gas or oil) to furnish approximately 4 to 5 billion BTU/yr for the fume incinerator. This is partially offset by elimination of the electrical consumption of the wet scrubber (50–60,000 kwh/yr) presently employed.

For the wet dust collection subcategory, the best practicable control technology available is the level of control that constitutes minimum current practice; hence, there is no effect of this level of control on energy requirements. Implementation of best available technology economically achievable through replacing wet scrubbers with bag houses reduces energy requirements by eliminating the consumption of electricity for pumping scrubber water.

Energy requirements for the coating or finishing of asbestos textiles subcategory are those associated with transportation and final disposal of the containerized wastes. At most they are several hundred gallons per year of motor fuel.

Non-water quality environmental impacts are minimal, constituting only the added sanitary landfill space required for disposal of fewer than 3,000 drums per year of containerized wastes from the textile coating subcategory.

(vii) *Economic impact analysis.* The economic impact of the guidelines for the textiles, friction materials, and sealing devices segment of the asbestos manufacturing point source category is very limited. Since many of the operations (e.g., textile weaving and sealing devices manufacture) are representative of dry industry and much of the waste water from wet operations is discharged to municipal systems, only 5 plants are affected. Affected plants include one sheet gasket material plant and four friction materials plants. None of the affected plants are expected to close due to the economic impact of the guidelines.

For the various segments of the industry the estimated net after tax returns as percent of sales are: textiles, 3.3%; friction materials, 3.0%; and sealing devices, 5.0%. One sheet gasket plant incurs costs for implementation of BPCTA (1977) guidelines, equal to 0.7 percent of sales. Five plants incurred costs for implementation of BATEA (1983) guidelines. The types of plants and the costs incurred as a percent of sales are: one sheet gasket plant, 1.0%, and four friction material plants, ranging from 0.05 to 1.2%. It is believed that most of the waste control costs can be recovered by increased prices. Complete recovery would require price increases of less than 2.0% for the affected plants.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Textile, Friction Materials and Sealing Devices Segment of the Asbestos Manufacturing Point Source Category" details the analysis undertaken in support of the regulation being proposed herein and is available for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C.; at all EPA regional offices, and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the proposed regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulation, or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman.

On June 14, 1973, the Agency published procedures designed to insure that, when certain major standards, regulations, and guidelines are proposed, an explanation of their basis, purpose and environmental effects is made available to the public (38 FR 15653). The procedures are applicable to major standards, regulations and guidelines which are proposed on or after December 31, 1973, and which prescribe national standards of environmental quality or require national emission, effluent or performance standards and limitations.

The Agency determined to implement these procedures in order to ensure that the public was apprised of the environmental effects of its major standards setting actions and was provided with detailed background information to assist it in commenting on the merits of a proposed action. In brief, the procedures call for the Agency to make public the information available to it delineating the major nonenvironmental factors affecting the decision, and to explain the viable options available to it and the reasons for the option selected.

The procedures contemplate publication of this information in the FEDERAL REGISTER, where this is practicable. They provide, however, that where, because of the length of these materials, such publication is impracticable, the material may be made available in an alternate format.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Textile, Friction Materials and Sealing Devices Segment of the Asbestos Manufacturing Industry Point Source Category" contains information available to the Agency concerning the major environmental effects of the regulation proposed below, including:

(1) the pollutants presently discharged into the Nation's waterways by manufacturers of asbestos and the degree of pollution reduction obtainable from implementation of the proposed guidelines and standards (see particularly sections IV, V, VI, IX, X, and XI);

(2) the anticipated effects of the proposed regulation on other aspects of the environment including air, solid waste disposal and land use, and noise (see particularly section VIII); and

(3) options available to the Agency in developing the proposed regulatory system and the reasons for its selecting the particular levels of effluent reduction which are proposed (see particularly sections VI, VII, and VIII).

The supplementary report entitled "Economic Impact of 1972 Federal Water Pollution Control Amendments on the Asbestos Industry" contains an estimate of the cost of pollution control requirements and an analysis of the possible effects of the proposed regulation on prices, production levels, employment, communities in which asbestos manufacturing plants are located, and international trade. In addition, the Development Document describes, in section VIII, the cost and energy consumption implications of the proposed regulations.

The two reports described above in the aggregate exceed 100 pages in length and contain a substantial number of charts, diagrams, and tables. It is clearly impracticable to publish the material contained in these documents in the FEDERAL REGISTER. To the extent possible, significant aspects of the material have been presented in summary form in foregoing portions of this preamble. Additional discussion is contained in the following analysis of comments received and the Agency's response to them. As has been indicated, both documents are available for inspection at the Agency's Washington, D.C. and regional offices and at State water pollution control agency offices. Copies of each have been distributed to persons and institutions affected by the proposed regulations or who have placed themselves on a mailing list for this purpose. Finally, so long as the supply remains available, additional copies may be obtained from the Agency as described above.

When this regulation is promulgated, revised copies of the Development Document will be available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Copies of the Economic Analysis will be available through the National Technical Information Service, Springfield, Virgina 22151.

(C) SUMMARY OF PUBLIC PARTICIPATION

Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of effluent limitations, guidelines and standards proposed for the asbestos manufacturing category. All participants have been informed of project developments. An initial draft of the Development Document was sent to all participants and comments were solicited on that report. The following are the principal agencies and groups consulted: (1) Effluent Standards and Water Quality Information Advisory Committee (established under section 515 of the Act); (2) all State, Interstate and U.S. Territory Pollution Control Agencies; (3) The American Society of Civil Engineers; (4) The American Society of Mechanical Engineers; (5) Hudson River Sloop Restoration, Inc.; (6) The Conservation Foundation; (7) Environmental Defense Fund, Inc.; (8) Natural Resources Defense Council; (9) Water Pollution Control Federation; (10) National Wildlife Federation; (11) The Asbestos Textile Institute; (12) The Fluid Sealing Association; (13) The Friction Materials Standards Institute; (14) The Asbestos Information Association; (15) U.S. Department of Commerce; (16) U.S. Department of the Interior; (17) The Water Resources Council; (18) The U.S. Department of Health, Education, and Welfare; and (19) The U.S. Department of Agriculture.

The following responded with comments: Delaware River Basin Commission, Minnesota Pollution Control Agency, and Raybestos-Manhattan.

The primary issues raised in the development of the proposed effluent limitations guidelines and standards of performance and the treatment of these issues herein are as follows:

(1) One commenter expressed concern in regard to three areas: costs for achieving both the 1977 and 1983 control levels, replacement of wet scrubbers with baghouses for dust control, and discharge of the industry segment's waste to municipal sewage systems.

The commenter considered the estimate of the industry-wide costs for achieving both the 1977 and 1983 control levels to be unrealistically low. He was uncertain as to reasons, but assumed a major factor may rest in underestimation of effluent water volume and effluent wastes loads. He specifically cited the "150,000 gallons per day maximum for the largest plant" (actually, the maximum for a wet dust collection subcategory operation) as being far lower than that of at least one plant.

The waste discharges and associated control costs are based on the best data available to EPA and its contractor. It would appear, moreover, that the commenter has confused the waste discharge for a single subcategory (operation) within a plant with that of the entire plant. In addition, it would appear that the commenter has not considered the fact that most operations in the segment are dry operations or discharge to municipal systems, and thus are not affected by guidelines applicable to point source discharges.

The commenter believed that it should be recognized that some operations may require scrubbers rather than baghouses because of fire hazards or other limitations on the use of dry collection systems. Thus, provisions shoud be made for use of high energy wet scrubbers, and their cost and energy requirements should be evaluated.

In its evaluation of the industry, neither EPA nor its contractor have been able to discern operations in which fire hazards or other limitations render use of baghouses to replace wet scrubbers infeasible; nor has the commenter furnished documentation of such cases. To the contrary, EPA believes that such replacement is supported by a number of factors. For dusts from the asbestos industry, baghouses more adequately control atmospheric emissions and eliminate waste waters and waste water pollutants. Energy requirements are reduced when baghouses are employed. Baghouses have been designed for and employed in operations with fire hazards and other problems much more severe than those within the asbestos industry. Baghouses are widely employed within the industry, and many companies have programmed replacement of existing wet scrubbers with baghouses.

The commenter believed there was an implication that discharges to municipal systems will not be allowed and felt that provision should be made for such discharges where they would achieve compliance with effluent standards at lowest cost.

It is not the intent of EPA to prohibit discharges to publicly owned systems by the affected segment of the asbestos manufacturing industry. In fact, the wastes in general are compatible with municipal systems, and many facilities presently are discharging to municipal systems with or without some degree of pretreatment.

(2) One commenter suggested that effluent standards be promulgated for phenols, heavy metals and nutrients, and that the pH limits be set at 6.5–8.5 rather than 6.0–9.0.

Phenols are not expected to be present at significant levels, especially in waste discharges that meet the limitations for the established control parameters. Moreover, most phenols encountered in the waste waters for the affected segment of the asbestos industry will be found in the form of insoluble phenolic resins, and thus are most significant as suspended solids, not as phenols. Similarly, heavy metals are primarily in the form of particulates, not dissolved salts.

Nutrients in the wastes from the four subcategories are not considered to be significant. In fact, the levels of nutrients (phosphorus and nitrogen) are so low that nutrient addition must be practiced in those cases where biological treatment is recommended as a control measure.

In view of the foregoing, EPA does not believe that the added costs associated with specific control measures and monitoring for these additional parameters are justifiable.

In guidelines for other industries, and for other segments of the asbestos industry, pH limitations of 6.0–9.0 have been adopted. EPA does not see any reason for adopting more restrictive pH limitations of 6.5–8.5 for these subcategories of the asbestos manufacturing point source category, especially when only in the case of waste water for vapor absorption would pH be expected to deviate significantly from that of the intake water.

Interested persons may participate in this rulemaking by submitting written comments in triplicate to the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman. Comments on all aspects of the proposed regulation are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which are available, or which may be relied upon by the Agency, comments should identify and, if possible, provide any additional data which may be available and should indicate why such data are essential to the development of the regulations. In the event comments address the approach taken by the Agency in establishing an effluent limitations guidelines or standard of performance, EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of sections 301, 304(b), 306 and 307 of the Act.

A copy of all public comments will be available for inspection and copying at the EPA Information Center, Room 227, West Tower, Waterside Mall, 401 M Street SW., Washington, D.C. A copy of preliminary draft contractor reports, the Development Document and economic study referred to above, and certain supplementary materials supporting the study of the industry concerned will also be maintained at this location for public review and copying. The EPA information regulation, 40 CFR Part 2, provides that a reasonable fee may be charged for copying.

All comments received on or before September 30, 1974 will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202).

Dated: August 16, 1974.

JOHN QUARLES,
Acting Administrator.

It is proposed to amend 40 CFR Part 427, Asbestos Point Source Category, by adding new Subparts H, I, J, and K as set forth below.

Subpart H—Coating or Finishing of Asbestos Textiles Subcategory

Sec.	
427.80	Applicability; description of the coating or finishing of asbestos textiles subcategory.
427.81	Specialized definitions.

Sec.
427.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.84 Reserved.
427.85 Standards of performance for new sources.
427.86 Pretreatment standards for new sources.

Subpart I—Solvent Recovery Subcategory

427.90 Applicability; description of the solvent recovery subcategory.
427.91 Specialized definitions.
427.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.94 Reserved.
427.95 Standards of performance for new sources.
427.96 Pretreatment standards for new sources.

Subpart J—Vapor Absorption Subcategory

427.100 Applicability; description of the vapor absorption subcategory.
427.101 Specialized definitions.
427.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.104 [Reserved]
427.105 Standards of performance for new sources.
427.106 Pretreatment standards for new sources.

Subpart K—Wet Dust Collection

427.110 Applicability; description of the wet dust collection subcategory.
427.111 Specialized definitions.
427.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.114 [Reserved]
427.115 Standards of performance for new sources.
427.116 Pretreatment standards for new sources.

AUTHORITY: Secs. 301, 304 (b) and (c), 306(b), 307(c), Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316(b), 1317(c), 86 Stat. 816 et seq.; P.L. 92-500.

Subpart H—Coating or Finishing of Asbestos Textiles

§ 427.80 Applicability; description of the coating or finishing of asbestos textiles subcategory.

The provisions of this subpart are applicable to discharges resulting from the process of coating or impregnating asbestos textiles with various materials to impart specific desired qualities to the finished product.

§ 427.81 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR Part 401 shall apply to this subpart.

§ 427.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available: there shall be no discharge of waste water pollutants to navigable waters.

§ 427.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable: there shall be no discharge of waste water pollutants to navigable waters.

§ 427.84 [Reserved]

§ 427.85 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart: there shall be no discharge of waste water pollutants to navigable waters.

§ 427.86 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the coating or finishing of asbestos textiles subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows:

In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 427.85; *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

Subpart I—Solvent Recovery Subcategory

§ 427.90 Applicability; description of the solvent recovery subcategory.

The provisions of this subpart are applicable to discharges resulting from the process of solvent recovery in the manufacture of asbestos products.

§ 427.91 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR Part 401 shall apply to this subpart.

§ 427.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to

factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
COD	100	50
TSS	60	30
pH	Within the range 6.0 to 9.0.	

§ 427.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
COD	10	5
TSS	10	5
pH	Within the range 6.0 to 9.0.	

§ 427.94 [Reserved]

§ 427.95 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
COD	10	5
TSS	10	5
pH	Within the range 6.0 to 9.0.	

§ 427.96 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the solvent recovery subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows:

In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 427.95; *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

Subpart J—Vapor Absorption

§ 427.100 Applicability; description of the vapor absorption subcategory.

The provisions of this subpart are applicable to discharges resulting from the removal of volatilized organic materials from atmospheric emissions by means of wet scrubbers.

§ 427.101 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR Part 401 shall apply to this subpart.

§ 427.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available: there shall be no discharge of waste water pollutants to navigable waters.

§ 427.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achieveable: there shall be no discharge of waste water pollutants to navigable waters.

§ 427.104 [Reserved]

§ 427.105 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart: there shall be no discharge of waste water pollutants to navigable waters.

§ 427.106 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the vapor absorption subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows:

In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 427.105: *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

Subpart K—Wet Dust Collection

§ 427.110 Applicability; description of the wet dust collection subcategory.

The provisions of this subpart are applicable to discharges resulting from the removal of dust (particulates) from atmospheric emissions by means of wet scrubbers.

§ 427.111 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR Part 401 shall apply to this subpart.

§ 427.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent Characteristic	Effluent Limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
TSS	60	30
pH	Within the range 6.0 to 9.0.	

§ 427.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable: there shall be no discharge of waste water pollutants to navigable waters.

§ 427.114 [Reserved]

§ 427.115 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart: there shall be no discharge of waste water pollutants to navigable waters.

§ 426.116 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) or the Act for a source within the wet dust collection subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows:

In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 427.115; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

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